

ABSTRACT OF THE DISCLOSURE

A two wire serial bus is connected between different circuit boards in a complex electrical system. The two wire serial bus may be used to receive status information about each of the circuit boards in the system. A master control processor on one of the circuit boards controls which of the other circuit boards are active on the serial bus. Each of the non-master circuit boards includes a series of switches that electrically isolate or connect portions of the two wire serial bus from one another. Through the series of switches, both the master control processor and processors local to each of the other circuit boards may simultaneously access different portions of the serial bus.